

Response to Written Comments
Draft Waste Discharge Requirements
Order No. R1-2019-0037
National Pollutant Discharge Elimination System (NPDES)
for the Humboldt State University Telonicher Marine Laboratory
Regional Water Quality Control Board, North Coast Region
October 17, 2019

Comment Letter Received

The deadline for submittal of public comments regarding draft Waste Discharge Requirements for Order No. R1-2019-0037, National Pollutant Discharge Elimination System Permit (Draft Permit) for the Humboldt State University (HSU) Telonicher Marine Laboratory was September 4, 2019. HSU Telonicher (Permittee) provided timely comments. No other comments were received during the public comment period.

In this document, the Permittee's comments are summarized, followed by the Regional Water Board staff response. Text to be added is identified by underline and text to be deleted is identified by ~~strike-through~~ in this document. The term "Draft Permit" refers to the version of the permit that was sent out for public comment. The term "Proposed Permit" refers to the version of the permit that has been modified in response to comments and is being presented to the North Coast Regional Water Quality Control Board (Regional Water Board) for consideration.

Permittee Comments

Comment 1:

The Permittee requests that the Disaster Preparedness Assessment Report and Action Plan requirement be waived citing that the Marine Lab is located well outside of currently projected flooding/tsunami inundation zones even when looking at inundation modeling for sea level rise for the next ten years and that the Marine Lab is not like a wastewater treatment plant, thus if the lab were unable to operate normally there would be no risk to life, safety or environmental protection to take into account for disaster planning. HSU has a general University disaster plan which provides an overall guide to the University's response to disaster situations. Through the campus THIRA (threat and hazard identification and risk analysis) which is based on historical data as well as future threat and risk modeling, Humboldt State is not at risk for sea level rise related disasters within the next ten years at current projections.

Response: Regional Water Board staff agree with the Permittee's assessment that the Disaster Preparedness Assessment Report and Action Plan requirement is not needed for this Facility. This requirement that was included as Provision VI.C.2.d of the Draft Permit has been removed from the Proposed Permit. In addition, Fact Sheet language to support this requirement has been removed from Fact Sheet section VI.B.2.d.

Comment 2:

The Permittee requests clarification regarding the parameters that are required to be sampled for pre- and post-seawater discharge monitoring. Section VII.J of the Draft Permit identifies total suspended solids (TSS), settleable solids (SS), and turbidity while Table Note 7 to Table E-2 identifies TSS, SS, and pH. The comment further notes that past sample data has demonstrated that the pH rarely fluctuated from 7.8 in the Permittee's effluent and would not be expected to create a change in the Bay. The Lab's seawater pH is also tested weekly for the health of the organisms kept in the seawater system. Additionally, if turbidity is meant to be the sampling requirement, it may be a redundant monitoring parameter – as it is typically related to the same pollutant sources as TSS, both of which are more directly influenced by tidal conditions than the Permittee's discharges to the ASBS.

Response: State Board Resolution No. 2011-0049 requires the pre- and post-storm and pre- and post-seawater discharge receiving water monitoring to be conducted for the same Table 2 constituents that are monitored in the seawater and storm water discharges. Prior to the adoption of Order No. R1-2013-0006, monitoring data demonstrated that pH fluctuates little and that TSS and SS are most representative of this discharge, therefore, pre- and post- storm water and seawater monitoring was limited to TSS and SS. The Proposed Permit has been modified to reflect this with the following changes:

Section VII.J has modified to remove all references to turbidity, as follows: “TSS₇ and Settleable Solids ~~and Turbidity~~ Effluent Limitations. For TSS₇ and settleable solids, ~~and turbidity~~ in seawater discharges, the determination of changes to “natural water quality” as defined in State Water Board Resolution No. 2011-0049 is determined by statistical comparison of receiving water concentrations prior to and after a filter backwash discharge event. The Permittee shall collect a minimum of three pre-discharge samples at Monitoring Location RSW-001A within 1 hour prior to the discharge event. Within 24 hours following the initiation of the discharge, the Permittee shall collect a minimum of three post-discharge samples at Monitoring Location RSW-001B and analyze each sample for TSS₇ and settleable solids ~~and turbidity~~. The Permittee shall conduct a t-test to determine if there is a statistical difference in the means of the two distributions of sampling results at the 95th percent confidence level. If the average TSS₇ or settleable solids ~~or turbidity~~ concentration in the pre-discharge samples is lower than the post-discharge samples and the difference is statistically significant, then the discharge is out of compliance. ...”

Table E-7 has been modified to remove the monitoring requirement for pH and require monitoring for TSS and settleable solids only.

Comment 3a:

The Permittee requests that Table Note 5 to Table E-2 be removed. This table note requires the Permittee to conduct monitoring on at least one discharge containing seawater sump water and at least one discharge containing seawater tank water. The comment explains that, due to the nature of the plumbing setup at the Marine Lab,

discharges of commingled effluent cannot be separated into sump water and tank water. During a filter backwash event, system seawater flows from the tanks to the sump and is then pumped through the filters to the discharge point. A sump discharge would only be possible by bypassing the filters. Because the tanks drain into the sump and water is pumped back to the tanks from the sump, separation of tank water and sump water is impossible.

Response: The Fact Sheet of the Proposed Permit states that the Permittee occasionally drains the seawater sump and the storage tanks for preventative maintenance, potentially discharging up to 2,000 gallons of sump water at a time and 20,000 gallons of tank water over a period of two days. Table Note 5 of Table E-2 has been modified to state, “If During the term of the permit, the Permittee drains the seawater sump or storage tanks, the Permittee shall conduct analyses on at least one discharge sample containing seawater sump water and at least one discharge sample containing seawater tank water.”

Comment 3b:

Table E-1 has modified the monitoring location descriptions for Discharge Point 001 (monitoring location for seawater, filter backwash water, and storm water) to provide a way to identify the type of discharge occurring to that single discharge location at any time. The comment states that this discharge location is used to discharge primarily filter backwash water and storm water. The comment further states that if a tank is dumped (characterized as a rare occurrence), it is raw sea water that has not circulated in the system. Overflows from intake events are also just raw sea water. “Therefore, it would be more accurate to have only one sea water discharge type: EFF-001A ‘filter backwash’”. If the tank dump monitoring is kept as a requirement, it is possible that the tanks will not be dumped during a permit term and the Permittee would like to remain in compliance with monitoring requirements should this be the case. It would be okay to keep EFF-001D as commingled filter backwash and storm water (in the event a filter back wash is done when it is raining) even though it is more useful to keep them separated for sampling purposes, as well as the fact that ultimately the Permittee will have no storm discharge (see Comment 12).

Response: Based on the information provided in this comment and discussions with the Permittee, Regional Water Board staff believe it is appropriate to retain the four different designations to ensure that there is clear identification of any discharge that might occur from this Facility during the upcoming permit term. The types of discharge that will or could occur include, filter backwash, storm water, waste seawater (if seawater sump or storage tanks need to be drained), and some combination of these discharges. Table E-1 of the Proposed Permit will retain monitoring location designations for these four possible types of discharges, with language added to reflect that monitoring for waste seawater (i.e., from the seawater sump or storage tank draining) is only required if waste seawater is discharged.

Comments 4 and 10, below, also resulted in changes to Table E-1, therefore, a copy of Table E-1 with all changes made in response to Comments 3b, 4, and 10, is included in the response to Comment 10, below.

Comment 4:

Table E-1 defines RSW-001A and RSW-001B incorrectly. RSW-001A should state that it is for both pre-storm and pre-seawater and RSW-001B should be for both post-seawater and post-storm water.

Response: This correction has been made to Table E-1. A copy of Table E-1 with all changes made in response to Comments 3b, 4, and 10, is included in the response to Comment 10, below.

Comment 5.

The Permittee is concerned about the finding of reasonable potential for a number of Ocean Plan Table 1 pollutants in the seawater (primarily filter backwash), including arsenic, copper, lead, mercury, nickel, zinc, bis (2-ethylhexyl) phthalate, and polynuclear aromatics. The Permittee is concerned that it will be held to an unattainable standard since the Marine Lab cannot treat the seawater that it takes from the ocean before it discharges the seawater back to the ocean. The comment states that monitoring data has shown that the ocean water pumped to the Marine Lab contains levels of metals and TSS, and that the Marine Lab contributes negligible pollutants. Further, the Permittee believes that background data obtained through the regional monitoring program (receiving water and reference site monitoring) establishes natural water quality background data that should be subtracted from the effluent concentration to determine the true pollutant contribution from the lab.

The Permittee would like the permit to provide the option to take influent samples at the discretion of the Permittee and submit such samples as necessary when the Marine Lab is unable to comply with effluent limitations simply because the ambient conditions are already above the WQO.

Response: The reasonable potential analysis for the Proposed Permit was conducted using effluent monitoring data submitted by the Permittee during the term of Order No. R1-2013-0006 and effluent limitations were calculated following procedures required by the Water Quality Control Plan Ocean Waters of California (2015) (Ocean Plan). The Ocean Plan formula for calculating effluent limitations utilizes ambient background data, but in situations where there is no dilution credit, consideration of ambient background drops out of the calculation. The Ocean Plan does not currently describe a protocol for considering the effect of the water quality of intake water on effluent discharged from a facility. Regional Water Board staff propose to discuss this topic with State Water Board staff; however, a resolution of this issue may take some time.

Regional Water Board staff agree with the Permittee's assertion that seawater pumped from Trinidad Bay for use in the Facility contains some of the pollutants (specifically TSS, settleable solids, and several metals, including arsenic, copper, lead, mercury, nickel, and zinc) that were determined to have reasonable potential. Regional Water Board staff reviewed the ambient background data that was submitted by the Permittee

and found that the concentration of metals in the ambient background samples (collected at the reference site REF-001 near the mouth of Agate Creek) are typically much lower than the concentrations of metals detected in effluent discharged from the Facility. Pollutant concentrations discharged in the filter backwash water apparently concentrate as seawater is passed through the filters.

Order No. R1-2013-0006 and the Proposed Permit require the Permittee to develop a pollutant minimization program for priority pollutants that are present in the effluent above an effluent limitation, if required by the Regional Water Board Executive Officer. Following permit adoption, Regional Water Board staff will prepare a letter requiring the Permittee to develop and implement a pollutant minimization program describing the Permittee's strategy to ensure that any sources of such pollutants are properly controlled at the Facility. Development of a PMP will ensure that the Permittee has reviewed its Facility for all potential controllable sources of each pollutant. The letter will also require the Permittee to conduct a mass balance for Ocean Plan Table 1 priority pollutants that are detected in the effluent at concentrations that exceed Ocean Plan Table 1 water quality objectives.

No changes were made to the Proposed Permit in response to this comment.

Comment 6:

The Permittee requests that the requirement for accelerated monitoring in Table E-2, Table Note 8 be modified to require that accelerated samples be taken at the next operationally required discharge event. This request is being made because the Marine Lab discharges intermittently.

Response: Due to the intermittent nature of this discharge, Regional Water Board staff find that it would be unreasonable to require unnecessary discharges in order to accommodate the requirement that was in the Draft Permit to sample 7 and 14 days following receipt of the initial sample result. The Proposed Permit has been modified to incorporate the Permittee's suggestion as follows, "Accelerated Monitoring (quarterly and semiannual monitoring frequency). If a test result exceeds an effluent limitation the Permittee shall ~~take two more samples, one within 7 days and one within 14 days~~ sample the next two operationally required discharge events that occur following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance." This change has been made to Tables E-2 and E-4 of the Proposed Permit.

Section V.A.8 also requires accelerated monitoring related to chronic toxicity, thus the language in this section of the Proposed Permit has been modified to recognize that this is an intermittent discharge. The revised language reads as follows: "**Accelerated Monitoring Requirements.** Accelerated monitoring for chronic toxicity is triggered when a chronic toxicity test, analyzed using the TST approach, results in "Fail" and the "Percent Effect" is ≥ 0.50 . Within 24 hours of the time the Permittee becomes aware of a summary result of "Fail", the Permittee shall implement an accelerated monitoring schedule consisting of four toxicity tests—consisting of 5-effluent concentrations (including the discharge IWC) and a control—conducted at approximately 2-233k

~~intervals, over an 8-week period during the next four operationally required discharge events.~~ If each of the accelerated toxicity tests results is "Pass," the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results is "Fail", the Permittee shall immediately implement the TRE Process conditions set forth in section V.B, below.

Comment 7:

Table E-4, Table Note 11 states that storm water must be sampled for Ocean Plan Table 1 constituents. Please specify what constituents are required, as it is the Permittee's understanding that based on the data from the previous permit cycle, many of the Table 1 constituents were not detected and could be dropped from this requirement.

Response: Regional Water Board staff find that it is appropriate to modify the Table 1 pollutant monitoring requirement for EFF-001C to require monitoring for only those Table 1 pollutants that were detected during the term of the previous permit. A new table note has been added to Table E-4 that reads as follows: "Monitoring is required for all Table 1 metals (arsenic, cadmium, chromium, copper lead, mercury, nickel, selenium, silver, zinc, antimony, thallium, beryllium), ammonia, bis(2-ethylhexyl) phthalate, PAHs, and PCBs. Monitoring for other Table 1 pollutants is waived unless such monitoring is requested in writing by the Regional Water Board." This table note is consistent with the same reduction in Table 1 constituent monitoring requirements provided in Tables E-2 and E-3.

Comment 8:

Fact Sheet section IV.A.6 (regarding Prohibition III.F) states that the Regional Water Board has concerns about maintenance activities creating high strength waste. The Marine Lab has no such activities but seeks clarity on the definition of high strength waste, including the types of activities that might produce high strength wastes.

Response: The intent of this prohibition is to provide clarity that solid or other wastes that are generated during cleaning and maintenance activities must not be placed into the seawater discharge outfall. During a site inspection on November 14, 2017, Regional Water Board and EPA-contract inspectors observed that storm drain inlet filters did not appear to be maintained and debris was observed in the storm drain inlets. Debris and solids that collect on the filters must be removed and properly disposed.

Fact Sheet section IV.A.6 has been modified to provide additional clarity, as follows: "This prohibition is newly established in this Order. This prohibition is based on the Regional Water Board's concern that cleaning and maintenance activities may produce high strength wastes that may include cleaning chemicals, concentrate pollutants, or generate solids that should not be discharged to the seawater outfall. Storm drain inlets and filters must be maintained in accordance with the Facility storm water management plan to ensure that solids and debris are removed from the inlets and disposed of properly. Solids that are removed from any location on the Facility shall not be deposited into any manhole or other connection to the seawater discharge outfall." This

prohibition is also contained in the Basin Plan Policy on the Regulation of Fish Hatcheries, Fish Rearing Facilities, and Aquaculture Operations.

Comment 9:

The Permittee requests that the Regional Water Board consider a more accurate way to assess compliance with effluent limitations that apply to discharges at EFF-001A (Table 4 of the permit). The comment provides the following as a basis for this request: “The Marine Lab pulls water up directly from the ASBS to be stored in the tanks to be used at some later time. The Marine lab pumps enough seawater directly from the ASBS to fill the storage tanks, then stops the intake pump once the tanks are full. This water is then recirculated (filtered and chilled) for up to two months before the next intake event. When the filters are backflushed, the ASBS is sampled both before and after the event to show what the water quality is at the time of discharge. The idea then, is that if the pre-discharge [receiving] water is higher in TSS or settleable solids than the post-discharge [receiving] water, then the effluent will be in compliance with that effluent limitation. However, because the water is stored for a period of time, there exists the possibility that if the water taken in at the time was high in TSS, as an example, which would ultimately make the discharge high in pre-existing TSS, but the ambient receiving water prior to the discharge was low in TSS (there are many reasons why this data point is naturally variable) and then after the discharge, tidal changes or other conditions which have been shown to alter the ambient TSS made the post samples high as well, it would indicate that the Marine Lab was out of compliance with effluent limitations, when it is a direct result of fluctuations already occurring in the Bay.”

Response: See response to Comments 5 and 11. No changes were made to the Proposed Permit in response to this comment.

Comment 10:

The Permittee requests modification of the sampling location for filter backwash discharge water. The Permittee would like to collect the backwash samples immediately after the seawater leaves the Marine Lab filters rather than at the location identified in Order R1-2013-0006 and the Draft Permit (manhole located at the corner of Van Wycke and Galindo Streets). The comment explains that the Permittee’s storm water drain plumbing which receives all discharges from the Marine Lab, also accepts storm water and non-storm water discharges from two of the City of Trinidad’s street drains. The Permittee does not have any control over discharges into the storm drain system from City streets.

Response: Regional Water Board staff find this to be a reasonable request and that it is appropriate to modify the sampling location for seawater sump and storage tank discharges as well to ensure that all samples are collected from locations that are most representative of the discharge source, therefore, Table E-1 has been modified as follows to include changes made in response to Comment 10 and to Comments 3b and 4, above.

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description ³
001	EFF-001A ¹	Waste seawater monitoring at the manhole located at the corner of Van Wycke and Galindo Streets. Filter backwash monitoring immediately following the seawater system filters.
001	EFF-001B ¹	Filter backwash monitoring at the manhole located at the corner of Van Wycke and Galindo Streets. Waste seawater monitoring immediately following the sump and seawater storage tanks. Monitoring is only required if the storage tanks are drained to the seawater outfall during the permit term.
001	EFF-001C ¹	Storm Water runoff monitoring at the manhole located at the corner of Van Wycke and Galindo Streets, <u>or alternate location on the Telonicher Marine Laboratory property upon submittal of a written request that includes a map identifying the specific monitoring location.</u>
001	EFF-001D ¹	<u>Any Ccommingled discharge of wastewater (i.e., waste seawater, filter backwash, and storm water) monitoring at the manhole located at the corner of Van Wycke and Galindo Streets, or alternate location on the Telonicher Marine Laboratory property upon submittal of a written request that includes a map identifying the specific monitoring location.</u>
--	RSW-001A ²	Receiving water in Trinidad Bay, within the surf zone, and immediately adjacent to Discharge Point 001. This monitoring location designation to be used when reporting <u>pre-storm and pre-seawater discharge</u> receiving water monitoring data.
--	RSW-001B ²	Receiving water in Trinidad Bay, within the surf zone, and immediately adjacent to Discharge Point 001. This monitoring location designation to be used when reporting <u>post-storm or post-seawater discharge</u> receiving water monitoring data.
--	REF-001	The reference station in the ocean near the mouth of Agate Creek, at the point where runoff from a reference watershed enters the ocean in the surf zone, representing background/natural water quality conditions.
--	SED-001	A subtidal sediment monitoring location in Trinidad Bay.
<p>Table Notes:</p> <ol style="list-style-type: none"> Monitoring Locations EFF-001A, EFF-001B, EFF-001C, and EFF-001D are the same monitoring location. Unique monitoring location names are assigned to differentiate effluent data associated with discharges of each type of discharge (filter backwash, waste seawater (sump or storage tank draining), stormwater, and commingled discharges). When there is a discharge of commingled discharge events (any combination of waste seawater, filter backwash and storm water) the Permittee shall report the discharge as EFF-001D and identify which waste streams were commingled. The Permittee shall use the unique effluent monitoring location name identifiers when reporting data to CIWQS so that the different types of effluent discharges at Discharge Point 001 are distinctly identified in CIWQS. Monitoring Locations RSW-001A and RSW-001B are the same monitoring location. Unique location names are used to differentiate receiving water monitoring data associated with <u>pre-storm water and pre-seawater discharge events from receiving water monitoring data associated with</u> and <u>post-storm water and post-seawater discharge events</u>. The Permittee shall use the unique receiving water monitoring location name identifiers when reporting data to CIWQS. <u>The Permittee shall submit to the Regional Water Board a revised Facility Map and Flow Schematic to identify any revised monitoring locations.</u> 		

Tables E-2, E-3, E-4, and E-7 were also revised and rearranged to reflect information in Table E-1, as follows:

The Proposed Permit now includes monitoring for filter backwash water as Table E-2 rather than Table E-3, monitoring for storm water discharges as Table E-3 rather than Table E-4, and monitoring for commingled discharges as Table E-4 rather than Table E-2. In addition, monitoring for seawater sump and storage tank discharge water is included in Table E-4.

New language has been added as MRP section IV.A.2, as follows: “If there is no discharge of filter backwash water, monitoring reports shall certify that there was no discharge during the monitoring period.”

New language has been added as MRP section IV.C.2, as follows: “If there are no commingled sampling events or discharges from the seawater sump or storage tanks during the monitoring period, the monitoring report shall certify “No commingled discharges occurred during this period.” and/or “No discharges from the seawater sump or storage tanks during this period.””

New language has been added as MRP section IV.B.5, as follows: “If the Permittee implements its proposed plan to infiltrate all storm water and ceases all storm water discharges, the Permittee shall notify the Regional Water Board Executive Officer in writing. All subsequent monitoring reports during the permit term shall certify “No discharge of storm water.”

Table E-7 has been corrected to identify both receiving water monitoring location designations (RSW-001A and RSW-001B).

Several sections of the MRP (sections V.A9 and X.D.2.h) and Fact Sheet (sections IV.C.5, VII.B, and VII.C) have been modified to reflect the changes to Tables E-1, E-2, E-3, E-4, and E-7 described above. Monitoring location, table, and section numbering have been made in these additional MRP and Fact Sheet sections to be consistent with the changes to the tables.

Fact Sheet section VII has been rearranged to describe effluent monitoring requirements in the order that they appear in the MRP and to change references to MRP Table numbers to reflect the change in Monitoring Location numbering.

Comment 11:

Section VII.K of the Draft permit describes how compliance with a six-month median effluent limitation is assessed and states that for intermittent discharges, the daily value is considered zero for days on which no discharge occurred. The Marine Lab is an intermittent discharger and only one sample of effluent is taken for each period (quarterly, semiannual and annual) and there is typically only one day of [filter backwash] discharge per month. If a single sample exceeds the instantaneous maximum for a parameter where there is also an average monthly and weekly effluent limitation, does the same apply where days of no discharge count as zero toward the average weekly and/or monthly effluent limitation? If a single effluent grab sample exceeds multiple effluent limitations for the same parameter (i.e., Ocean Plan Table 2 parameters have average monthly, average weekly, and instantaneous maximum effluent limitations, while many Ocean Plan Table 1 parameters have maximum daily, instantaneous maximum, and 6-month median effluent limitations), and a sample result exceeds more than one of those limits, are multiple violations assessed?

Response: Section VII (Compliance Determination) of the Proposed Permit describes how compliance with effluent limitations is to be determined. As noted by the Permittee, section VII.K states that for determination of compliance with a six-month effluent

limitation, daily values are considered to equal zero for days of no discharge for intermittent discharges. Therefore, the Permittee should calculate all 6-month median results using a value of zero for days of no discharge.

Section VII also describes how compliance with average monthly, average weekly, and daily maximum effluent limitations is determined. These definitions, which were established by the State Water Resources Control Board and were accepted by U.S. EPA, do not provide any special provisions for intermittent discharges. However, Ocean Plan Section C (Implementation Provisions for Table 1) states, "The daily maximum shall apply to flow weighted 24-hour composite samples." and "The instantaneous maximum shall apply to grab sample determinations."

A review of monitoring data submitted during the term of the 2013 permit shows that the most common non-storm water discharge from this Facility is filter backwash discharges and these occur approximately once or twice a month for a period of 10 to 20 minutes per discharge and daily discharge volumes ranging from 2,800 gallons to 9,920 gallons, and monthly discharge volumes ranging from 0 to 9,920 gallons. All discharges from this Facility are intermittent and short-term discharges and all monitoring samples are collected as grab samples. Based on the Ocean Plan implementation provisions cited in the paragraph above, for this Order, Regional Water Board staff have determined that compliance with Ocean Plan Table 1 pollutants should be assessed using the instantaneous maximum effluent limitations rather than the daily maximum effluent limitations.

If a sample result exceeds more than one effluent limitation, multiple violations would be assessed. As discussed in the previous paragraph, this would not be the case for pollutants that have just a maximum daily and instantaneous maximum effluent limitation (total suspended solids, arsenic, copper, lead, mercury, nickel, and zinc) or just a single effluent limitation (pH, polynuclear aromatic hydrocarbons and bis(2-ethylhexyl) phthalate). In the Proposed Permit, the pollutants for which a single sample result could exceed multiple effluent limitations are as follows:

- settleable solids and turbidity at EFF-001A, EFF-001B and EFF-001D
- settleable solids, turbidity, and oil and grease at EFF-001C

The Proposed Permit has been modified to recognize this determination, as follows:

Section IV.A.1.a of the Proposed Permit has been modified to include a new footnote in Table 4. Footnote 4 applies to all Ocean Plan Table 1 pollutants identified in Table 4 and reads as follows: "Section VII.K of this Order describes how compliance with Ocean Plan Table 1 pollutants will be determined."

Section VII.K of the Proposed Permit has been modified to describe how compliance with effluent limitations will be determined for Ocean Plan Table 1 effluent limitations contained in Table 4 of the Proposed Permit and reads as follows:

"Six-Month-Median Ocean Plan Table 1 Effluent Limitations

Ocean Plan section III.C, Implementation Provisions for Table 1 describes how compliance is to be determined with effluent limitations established for Table 1 parameters, and includes the following:

Section III.C.4.f. The six-month median effluent limitations shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

Section III.C.4.g. The daily maximum shall apply to flow weighted 24-hour composite samples.

Section III.C.4.h. The instantaneous maximum shall apply to grab sample determinations.

All discharges from this Facility are intermittent, short-term, low volume discharges. Since discharges are intermittent, the six-month median shall be calculated using zeros for days of no discharge. Monitoring is conducted with grab samples, therefore compliance will further be assessed with the instantaneous maximum rather than the maximum daily effluent limitations. If at any time during the term of this permit, 24-hour composite sampling is required, compliance will be assessed with the maximum daily effluent limitation.”

Comment 12:

The Marine Lab was awarded Proposition 1 grant funds with the City of Trinidad to eliminate the storm water discharge to the ASBS. The Permittee requests verification that once there is no discharge of storm water to the ASBS, do the storm water monitoring requirements become automatically voided due to the lack of discharge? If there is a process whereby the Permittee must apply to have storm water monitoring requirements dropped, please specify.

Response: When the proposed plan to infiltrate all storm water is implemented, storm water monitoring would not be required. Monitoring is only required when there is a discharge. Section IV.B of the MRP has been modified to include the following statement: “If the Permittee implements its proposed plan to infiltrate all storm water and ceases all storm water discharges, the Permittee shall notify the Regional Water Board Executive Officer in writing. All subsequent monitoring reports during the permit term shall certify “No discharge of storm water.”

Comment 13:

The Permittee feels that the State Board Resolution (Resolution No. 2011-0049) has requirements that are outdated given the data collected during the previous permit cycle. There are monitoring requirements that could be dropped based on no reasonable potential but are upheld [in the Proposed Permit]. The Permittee would like to know whether the State Board Resolution will be updated to reflect protection of current water quality standards and the process for modifying the Resolution.

Response: State Water Board staff review all exceptions that have been granted to the Ocean Plan during its triennial reviews of the Ocean Plan. If the Permittee wishes to request a modification of State Water Board Resolution No. 2011-0049 that grants the exception to discharge to the Trinidad Bay ASBS, the Permittee would need to provide a written submittal to State Water Board staff identifying specific modifications that the Permittee requests to be made. State Water Board staff would evaluate the request to determine if an addendum is needed and work with the Permittee to gather any information needed to proceed with an addendum to the Resolution. The process might involve revision of the Initial Study/Mitigated Negative Declaration that was prepared prior to adoption of Resolution No. 2011-0049.

No changes were made to the Proposed Permit in response to this comment.

Staff Initiated Changes

1. Tables 1 and F-1 of the Draft permit state a Facility Design Flow. The flows discharged are not based on a facility design, rather these are the maximum anticipated flows based on historical discharge needs at the Facility. Therefore, Table 1 has been modified to change “Facility Design Flow” to “Maximum Permitted Flow” and Table F-1 has been modified as follows: “~~Facility Design and~~ Maximum Permitted Flow”.
2. Due to the intermittent nature of this discharge and that all pollutant monitoring is required a minimum of quarterly, Regional Water Board staff has determined that the permit effective date should coincide with the beginning of a quarter. Therefore, the permit effective date has been changed from December 1, 2019 to January 1, 2020. The permit expiration date and Report of Waste Discharge due dates have been changed to correspond to this change in the permit effective date.
3. MRP section X.D.2.i (Chemical Drug Use Reporting) has been modified to add the following: “If no chemicals or drugs are used, the report shall include the statement “No chemical or drug use.””
4. The following modifications have been made to the Proposed Permit since the Proposed Permit includes revised receiving water limitations for bacteria that are based on the State Water Board’s recent adoption of bacteria provisions:
 - a. Fact Sheet Section V.A has been modified to include the following statement: “On August 7, 2018 the State Water Board adopted the Amendment to the Water Quality Control Plan for Ocean Waters of California – Bacteria Provisions and a Water Quality Standards Variance Policy (Statewide Bacteria Provisions). This amendment revised State bacteria water quality objectives enterococci for water contact recreation to be expressed as a six-week rolling geometric mean and a statistical threshold value. Total coliform water contact objectives have been removed from the Ocean Plan, however, the shellfish harvesting standards for total coliform were unchanged. This”

Order includes the new enterococci water quality objectives as receiving water limitations.”

- b. Fact Sheet Section VII.D.1.b has been modified to include a new section iii, as follows: “Although the new receiving water limits for enterococci are expressed in colony-forming units (CFU) to reflect the new enterococci water quality objectives in the Ocean Plan, compliance monitoring may be conducted using any enterococci method specified in 40 CFR 136. The U.S. EPA and State Water Board consider CFU and most probable number (MPN) to be comparable. Testing methods that produce results in either of these units are equally protective of water quality objectives.”
- c. New language has been added to section VII.H Bacteriological Limitations to describe how compliance with the geometric mean, six-week rolling geometric mean, and statistical threshold value will be determined. The new language reads as follows:
2. **Geometric Mean (GM).** The geometric mean is a type of mean or average that indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum). The geometric mean shall be calculated using the 5 most recent samples from a site using the following formula:
$$\text{GM} = \sqrt[n]{(x_1)(x_2)(x_3)\dots(x_n)}$$
, where x is the sample value and n is the number of samples taken.
 3. **Six-week Rolling Geometric Mean.** The rolling geometric mean shall be calculated using at least 5 sample results over a 6-week period from a site using the following formula:
$$\text{GM} = \sqrt[n]{(x_1)(x_2)(x_3)\dots(x_n)}$$
, where x is the sample value and n is the number of samples taken.
 4. **Statistical Threshold Value.** (1) The data set shall be ranked from low to high, ranking any ND concentrations lowest, followed by quantified values. (2) The number of sample results should then be multiplied by 90 percent then rounded up to the nearest whole number. (3) Count the values in the data set starting from lowest to highest until the number indicated in step (2) is reached. (4) To be compliant with the statistical threshold value in Receiving Water Limitation V.A.2.a.i.b, all sample results less than the point described in step 3 must be less than 100 MPN/100 mL.
- d. Tables E-4, E-5, and E-6 have been modified with regard to enterococci monitoring requirements, as follows:
- i. The parameter name has been changed from “Enterococcus” to “Enterococci Bacteria” to be consistent with the Statewide Bacteria Provisions.

- ii. The units for enterococci bacteria have been modified to read, “MPN or CFU/100 mL” and a table note has been added to read, “MPN and CFU are comparable units. The Permittee may use any enterococci method specified in 40 CFR 136 for compliance monitoring.”
5. In a telephone discussion on September 4, 2019, the Permittee expressed concern that Tables E-2 and E-4 appear to include duplicative monitoring requirements for the Ocean Plan Table 1 pollutants that are listed separately in Tables E-2 and E-4, including arsenic, copper, lead, mercury, nickel, zinc, ammonia, Bis (2-ethylhexyl) phthalate, and polynuclear aromatics. The intent of listing these pollutants separately when the tables also include a requirement to sample Ocean Plan Table 1 Constituents is not to duplicate monitoring requirements, rather to provide a way to identify the need for accelerated monitoring for the parameters for which effluent limitations have been established in the Proposed Permit.

Table Note 10 of Table E-2 and Table Note 13 of Table E-4 have been modified to provide this explanation, as follows: “Monitoring is required for all Ocean Plan Table 1 metals (arsenic, cadmium, chromium, copper lead, mercury, nickel, selenium, silver, zinc, antimony, thallium, beryllium), ammonia, bis(2-ethylhexyl) phthalate, PAHs, and PCBs. Some of the parameters identified in this Table Note are also identified separately in this table because this Order includes effluent limitations for the separately listed parameters in order to identify the accelerated monitoring requirements. The Permittee is not required to duplicate monitoring for these pollutants. Monitoring for other Ocean Plan Table 1 pollutants is waived unless such monitoring is requested in writing by the Regional Water Board Executive Officer.”

6. New language has been added as section VII.E.3 of the Fact Sheet to explain the Minimum Levels and Reporting Levels requirement in the MRP and to identify the fact that during the term of Order No. R1-2013-0006, not all monitoring was conducted with sufficiently sensitive methods. The new language reads as follows:
“Minimum Levels (ML) and Reporting Levels (RL) (MRP section I.E).

In August 2014, U.S. EPA finalized minor amendments to the CWA to require NPDES permittees to use sufficiently sensitive analytical test methods for NPDES permit applications and reporting. This amendment, known as the “sufficiently sensitive methods rule”, clarifies that where U.S. EPA has promulgated or otherwise approved analytical methods under 40 CFR Part 136, or 40 CFR Chapter I, subchapters N and O, permittees must use “sufficiently sensitive methods” that are capable of detecting and measuring pollutants at, or below, the applicable water quality criteria or permit limits.

Regional Water Board staff reviewed data collected during the previous permit term and identified 25 Ocean Plan Table 1 pollutants that were not analyzed using sufficiently sensitive methods. These pollutants have been identified in Attachment G-1 (RPA Summary) so that the Permittee is aware of this matter and can make appropriate changes to ensure that monitoring data collected during the term of this Order are analyzed using sufficiently sensitive methods.”

7. Section V.A.5 (Species Sensitivity Screening) of the MRP has been revised to reflect the species sensitivity screening requirements from Order No. R1-2013-0006. The change was made after Regional Water Board staff discussed this requirement with U.S. EPA staff during a discussion regarding a different permit. The language has been revised to read as follows: “**Species Sensitivity Screening.** Species sensitivity screening shall be conducted during ~~the first three years of this permit’s term~~ this Order’s first required sample collection. The Permittee shall collect a single effluent sample ~~each year~~ and concurrently conduct chronic toxicity testing using ~~once species each year to include~~ the fish, an invertebrate, and the alga species identified in section V.A.4, above. ~~These~~ This samples shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest “Percent (%) Effect” at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the remainder of the permit term.”